

Appn. S.N. 10/807,887
Arndt dated December 1, 2006
Reply to Office Action of September 8, 2006
Docket No. 200208977-1

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In the claims:

1. (Previously presented) A method for forming a chamber in an electronic device, the method comprising:
preparing an outer surface on a solidified bifunctional core material, the solidified bifunctional core material in a depression formed in a substrate; and establishing a layer on the prepared outer surface of the solidified bifunctional core material and a portion of the substrate surrounding the depression, the established layer and the substrate defining a chamber.
2. (Original) The method of claim 1 wherein the established layer is composed of an optically transmissive material.
3. (Original) The method of claim 1 wherein the substrate is one of a semiconductor material and an optically transmissive material.
4. (Previously presented) The method of claim 1 wherein the bifunctional core material exhibits a solidified state at a first temperature and a fluidized state at a second temperature greater than the first temperature.
5. (Previously presented) The method of claim 1 wherein prior to preparing the outer surface, the method further comprises solidifying the bifunctional core material by at least one of temperature change, polymerization, and cross-linking.
6. (Previously presented) The method of claim 1 wherein the core material contains at least one of low melting waxes, naphthalene, naphthalene derivatives, acrylic monomers, acrylic polymers, camphor, camphor derivatives, camphinic acid polymers, polyesters, or mixtures thereof.
7. (Previously presented) The method of claim 1, further comprising converting the solidified bifunctional core material contained in the chamber into a fluidized bifunctional core material subsequent to establishing the layer.

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8. (Previously presented) The method of claim 7, further comprising removing at least a portion of the fluidized bifunctional core material from the chamber subsequent to converting the solidified bifunctional core material.

9. (Previously presented) The method of claim 7, further comprising operating the electronic device with at least a portion of the fluidized bifunctional core material present in the chamber.

10. (Previously presented) The method of claim 1 wherein establishing the layer is accomplished by at least one of spin deposition or sputter deposition.

11. (Previously presented) The method of claim 1 wherein the layer is formed of an optical quality material, the optical quality material including at least one of acrylates, epoxies, polycarbonates, polyimides, TEOS, silicate, polycarbonate, magnesium fluoride, quartz, or glass.

12. (Previously presented) The method of claim 1, further comprising removing at least a portion of the bifunctional core material after the layer has been established.

13. (Previously presented) The method of claim 12 wherein removing comprises at least one of sublimation, solvent dissolution, melting, or gas purging.

14. (Previously presented) The method of claim 1 wherein the electronic device has a minimum operating temperature and wherein the bifunctional core material solidifies at a temperature below the minimum operating temperature for the electronic device.

15. (Previously presented) The method of claim 5, further comprising: positioning at least one microelectromechanical device in the depression, the positioning occurring prior to preparing the outer surface; and

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introducing the bifunctional core material into the depression such that the bifunctional core material and the depression are in conforming relationship to each other, the introducing occurring prior to the solidifying.

16. (Original) The method of claim 15 wherein the microelectromechanical device is an optic MEMS device.

17. – 23. (Cancelled)

24. (Original) A process for making an optical microelectromechanical device, comprising:

introducing a bifunctional core material into a cavity defined in a substrate; and

establishing a layer on the bifunctional core material and the substrate, the layer and substrate defining a sealed chamber therebetween.

25. (Original) The process of claim 24 wherein the layer has an optical quality including at least one of optical transmission, reflectance, and diffraction.

26. (Original) The process of claim 24 wherein the cavity contains a microelectromechanical device and the bifunctional core material is placed in comprehensive contact with the microelectromechanical device and conformal relationship with the cavity.

27. (Original) The process of claim 24 wherein the bifunctional core material has at least two physical states, the two physical states including at least a solidified state at a first condition and a fluidized state at a second condition.

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28. (Original) The process of claim 27 wherein the first and second conditions are first and second temperatures, wherein the second temperature is greater than the first temperature, wherein the bifunctional core material is introduced at a temperature at least as great as the second temperature, and wherein the establishing occurs while the bifunctional core material is in the solidified state.

29. (Original) The process of claim 27, further comprising removing the bifunctional core material subsequent to establishing.

30. (Original) The process of claim 27, further comprising maintaining the bifunctional core material in the sealed chamber during operation of the device.

31. (Original) The process of claim 24, further comprising preparing a surface on an outer face of the bifunctional core material prior to establishing.

32. – 40. (Cancelled)